

WHAT IS CLAIMED IS:

1. A microcomputer comprising:

an oscillation circuit which oscillates and outputs
an oscillation signal;

5 a wakeup terminal that always receives from outside
a wakeup signal of a predetermined cycle; and

a clock control circuit which controls said
oscillation circuit so as to stops the oscillation, and based
on the wakeup signal received through said wakeup terminal
10 controls said oscillation circuit so as to restart the
oscillation.

2. The microcomputer according to claim 1, wherein said
clock control circuit nullifies the wakeup signal received
15 when the oscillation signal is output from said oscillation
circuit.

3. A microcomputer comprising:

an oscillation circuit which oscillates and outputs
20 an oscillation signal and stops the oscillation during a
period in which it receives an oscillation stop signal;

a wakeup terminal that receives from outside a wakeup
signal of a predetermined cycle; and

25 a clock control circuit which receives the wakeup
signal, outputs the oscillation stop signal, and stops output

of the oscillation stop signal based on the wakeup signal.

4. The microcomputer according to claim 3, wherein said
clock control circuit receives the oscillation signal from
5 said oscillation circuit and generates a main clock based
on the oscillation signal.

5. The microcomputer according to claim 3, wherein said
clock control circuit nullifies the wakeup signal received
10 when the oscillation signal is output from said oscillation
circuit.

6. The microcomputer according to claim 3, further
comprising a register which stores history information
15 related to the executed commands as register value,

wherein when said clock control circuit stops output
of the oscillation stop signal, processing is executed from
an instruction immediately following the instruction that
was executed just before stopping the oscillation of said
20 oscillation circuit based on a value stored in said register
just before stopping the oscillation of said oscillation
circuit.

7. The microcomputer according to claim 3, further
25 comprising an interrupt control circuit to which the wakeup

signal is input as an interrupt requesting signal for executing an interrupt processing,

wherein when the oscillation of said oscillation circuit is stopped when a permission for a request for an 5 external interrupt has been given, and further if said clock control circuit stops output of the oscillation stop signal, said interrupt control circuit executes the signal representing the permission for the request for the interrupt is input into said interrupt control circuit.

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8. The microcomputer according to claim 7, wherein the microcomputer is a one-chip microcomputer equipped with said oscillation circuit, clock control circuit, and said interrupt control circuit on the same LSI chip.

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9. The microcomputer according to claim 3, further comprising an address generating circuit which receives the wakeup signal and outputs, based on the wakeup signal, a specific address corresponding to which a specific 20 processing is to be performed,

wherein said address generating circuit outputs the specific address when said clock control circuit stops output of the oscillation stop signal.

25 10. The microcomputer according to claim 9, wherein the

microcomputer is a one-chip microcomputer equipped with said oscillation circuit, clock control circuit, and said interrupt control circuit on the same LSI chip.

5 11. The microcomputer according to claim 3, wherein said clock control circuit receives the oscillation signal and outputs the oscillation stop signal based on a condition of the oscillation signal.

10 12. A microcomputer comprising:

an oscillation circuit which oscillates and outputs an oscillation signal and stops the oscillation during a period in which it receives an oscillation stop signal;
a wakeup terminal that receives from outside a wakeup signal of a predetermined cycle; and

a clock control circuit which receives the wakeup signal, outputs the oscillation stop signal to said oscillation circuit only for a specific time interval based on the wakeup signal.

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13. The microcomputer according to claim 12, wherein said clock control circuit receives the oscillation signal and outputs the oscillation stop signal based on a condition of the oscillation signal.

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14. A microcomputer comprising:
an oscillation circuit which oscillates and outputs
an oscillation signal and stops the oscillation during a
period in which it receives an oscillation stop signal;
5 a wakeup terminal that receives from outside a wakeup
signal of a predetermined cycle; and
a clock control circuit which receives the wakeup
signal and the oscillation signal, outputs the oscillation
stop signal to said oscillation circuit only for a specific
10 time interval based on the wakeup signal and the oscillation
signal.

15. The microcomputer according to claim 14, wherein said
clock control circuit outputs the oscillation stop signal
15 based on a condition of the oscillation signal.

16. A microcomputer comprising:
an oscillation circuit which oscillates and outputs
an oscillation signal;
20 a wakeup terminal that receives from outside a wakeup
signal of a predetermined cycle; and
a clock control circuit which receives the wakeup
signal and the oscillation signal,
wherein said clock control circuit monitors a
25 condition of the oscillation signal and outputs the

oscillation stop signal to said oscillation circuit based on the condition of the oscillation signal thereby stopping the oscillations of said oscillation circuit,

when said oscillation circuit is not oscillating and

5 when specific time has lapsed, said clock control circuit stops output of the oscillation stop signal to said oscillation circuit based on the wakeup signal.

17. The microcomputer according to claim 16, wherein said
clock control circuit outputs the oscillation stop signal
when it does not receive the oscillation signal.

18. A microcomputer system comprising:

a wakeup signal supplying unit that generates a wakeup

15 signal of a predetermined cycle; and

a microcomputer, said microcomputer including,

an oscillation circuit which oscillates and
outputs an oscillation signal;

a wakeup terminal that always receives the wakeup

20 signal of a predetermined cycle from said wakeup signal
supplying unit; and

a clock control circuit which controls said
oscillation circuit so as to stops the oscillation, and based
on the wakeup signal received through said wakeup terminal
25 controls said oscillation circuit so as to restart the

oscillation.

19. A microcomputer system comprising:

a wakeup signal supplying unit that generates a wakeup

5 signal of a predetermined cycle; and

a microcomputer, said microcomputer including,

an oscillation circuit which oscillates and outputs
an oscillation signal and stops the oscillation during a
period in which it receives an oscillation stop signal;

10 a wakeup terminal that always receives the wakeup
signal of a predetermined cycle from said wakeup signal
supplying unit; and

15 a clock control circuit which receives the wakeup
signal, outputs the oscillation stop signal, and stops output
of the oscillation stop signal based on the wakeup signal.

20. The microcomputer according to claim 21, wherein said
clock control circuit receives the oscillation signal and
outputs the oscillation stop signal based on a condition
of the oscillation signal.

21. A microcomputer system comprising:

a wakeup signal supplying unit that generates a wakeup
signal of a predetermined cycle; and

25 a microcomputer, said microcomputer including,

an oscillation circuit which oscillates and outputs an oscillation signal;

a wakeup terminal that receives from outside a wakeup signal of a predetermined cycle; and

5 a clock control circuit which receives the wakeup signal and the oscillation signal,

wherein said clock control circuit monitors a condition of the oscillation signal and outputs the oscillation stop signal to said oscillation circuit based
10 on the condition of the oscillation signal thereby stopping the oscillations of said oscillation circuit,

when said oscillation circuit is not oscillating and when specific time has lapsed, said clock control circuit stops output of the oscillation stop signal to said
15 oscillation circuit based on the wakeup signal.

22. The microcomputer according to claim 21, wherein said clock control circuit outputs the oscillation stop signal when it does not receive the oscillation signal.

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